



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,537	10/03/2003	Tetsujiro Kondo	243480US6	2304
22850 7590 01/30/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER SMITH, JEFFREY S	
			ART UNIT	PAPER NUMBER
			2624	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/30/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/677,537

Applicant(s)

KONDO ET AL.

Examiner

Jeffrey S. Smith

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 5-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 5-14 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of claims 1-4 in the reply filed on December 27, 2006 is acknowledged. The traversal alleges that a search and examination of three different inventions can be made without serious burden. Applicant has failed to prove that this allegation is true.

Therefore, the requirement is deemed proper and is made FINAL.

Drawings

Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 3 and 4 are rejected under 35 U.S.C. 101 because they recite a computer program per se.

For claim 3, the claimed "recording medium" is not a computer readable medium, and the claimed program is "recorded" instead of stored. This language can read on a recording medium such as paper, which makes the program a computer program per se and is non-statutory subject matter.

For claim 4, the claimed "program" is not a computer program and is not stored in a computer readable medium. This computer program per se is non-statutory subject matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Application No. JP11258472 by Kondo ("Kondo") filed September 13, 1999 and published March 30, 2001.

For claim 1, Kondo discloses storing means for storing position information of pixels of a first frame that is earlier in time than a second frame for each address corresponding to a feature of each pixel (see element 24 of Fig. 5), first detecting means for detecting the position information stored at an address corresponding to a feature of a target pixel of the second frame (see Figs. 9 and 11), determining means for determining a centroid of candidate pixels of the first frame which are identified with the position information detected by the position information detected by the first detecting means (see 21 of Fig. 5), and second detecting means for detecting a motion vector of the target pixel from the position of the target pixel and the centroid (see 22 of Fig. 5, see also Figs. 6A, 6B, and 6C, and paragraphs 35-37).

For claim 2, the method of storing (steps S6, S7), first detecting (step S3), determining (step S4), and second detecting (step S5) are performed by the device of Fig. 5 as shown by the flow diagram of Fig. 7 and discussed in paragraphs 39-47.

For claims 3 and 4, Kondo discloses a computer program, which, when executed by a processing system, performs the method of storing, first detecting, determining, and second detecting, as shown in Fig. 34.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,805,736 issued to Kim ("Kim").

For claim 1, Kim discloses storing means for storing position information of pixels of a first frame that is earlier in time than a second frame for each address corresponding to a feature of each pixel (see frame memory 160 shown in Fig. 1), first

Art Unit: 2624

detecting means for detecting the position information stored at an address corresponding to a feature of a target pixel of the second frame (see col. 3 lines 1-5, the position information is image data that is stored at an address corresponding to the contour of the object, which is a feature of a target pixel), determining means for determining a centroid of candidate pixels of the first frame which are identified with the position information detected by the position information detected by the first detecting means (see previous centroid calculation block 210 in Fig. 2 and col. 3 lines 13-25), and second detecting means for detecting a motion vector of the target pixel from the position of the target pixel and the centroid (see motion vector detection block 220 and col. 3 lines 25-33).

For claim 2, the method of storing, first detecting, determining, and second detecting are performed by the device of Figs. 1 and 2 as discussed in col. 3 lines 1-33.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim.

For claims 3 and 4, Kim discloses the method of storing, first detecting, determining, and second detecting.

Art Unit: 2624

Kim does not disclose expressly a recording medium that stores a computer readable program for performing the method of storing, first detecting, determining, and second detecting.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to implement the method disclosed by Kim as software code that is stored in a computer readable medium and executed by a computer system. Applicant has not disclosed that the claimed recording medium in which a computer readable program is recorded provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Kim's invention to perform equally well with a computer readable program recorded in a recording medium, because the method of Kim is for MPEG compression, which is generally performed by computer software stored in a computer readable medium, which, when executed by a computer system, causes the system to perform the method of compression. Therefore, it would have been obvious to one of ordinary skill in this art to modify the method of Kim with a software program stored in a computer readable medium to obtain the invention as specified in claims 3 and 4.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Japanese Patent Number JP407274178A issued to Arai et al. discloses a motion vector detector of a centroid point matching system.

Art Unit: 2624

U.S. Patent Number 6,058,143 issued to Golin discloses detecting position information of a target pixel stored at an address corresponding to a feature such as display time, determining a centroid of candidate pixels identified with the position information, and detecting a motion vector from the position info and the centroid in column 5 lines 49-57.

Japanese Patent Number JP411220650A issued to Lee et al. discloses a detector that uses a gradation feature of the target pixel and a centroid of the previous field to detect a motion vector.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey S. Smith whose telephone number is 571 270-1235. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2624

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSS

JSS

January 22, 2007

JINGGE WU
SUPERVISORY PATENT EXAMINER

